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INTERNATIONAL ELECTROTECHNICAL COMMISSION

TECHNICAL COMMITTEE 80: Maritime navigation and radiocommunication equipment and systems

SHIPS AND MARINE TECHNOLOGY – MARINE ECHO-SOUNDING EQUIPMENT

Compilation of IEC and ISO comments on documents 80/204/INF and ISO TC 8/SC 6 N 26 (project ISO 9875, ISO TC 8/SC 6)

Document 80/204/INF contained the ISO/CD 9875 and members of TC 80 were invited to send their comments to Secretary TC 80 for collation and transmission to the ISO Secretariat.

This was done and the Secretary TC 80 has now received from the ISO TC8/SC 6 Secretariat the resolution of the comments. These are attached.

The ISO CD 9875 was successfully voted upon and the amended text has now been sent to the ISO Secretariat for circulation as DIS. TC 80 members will then have another opportunity to comment, but not vote. As this is not a joint project with ISO, only those TC 80 members who are members of ISO TC8/SC 6 will be able to vote.

The DIS has not yet been circulated: when it is, Secretary IEC TC 80 will circulate it as an information document.

Annexes: Comments on ISO/CD 9875
IEC/TC 80 members' comments on ISO/CD 9875

ISO/TC 8/SC 6 N 31 Rev.

Comments on ISO/CD 9875, Ships and marine technology
- Marine echo-sounding equipment (doc. TC 8/SC 6 N 26)

Member body	COMMENTS Comments shall be reproduced as received either by re-typing them, or directly by pasting them on this form	OBSERVATION OF THE SECRETARIAT on each comment submitted
Sweden	<p>All : The standard and the test methods proposed assumes a very conventional setup, with short narrow-band transmit pulses being fed to a transducer. Modern technology with most certainly make it possible to make a better and more reliable echo-sounder using normal signal processing technology, such as for instance PRBS signals, detection algorithms measuring the acoustic impedance variations rather than echo level etc. Such methods would make most of section 5 absolutely obsolete.</p> <p>Proposed change: General re-write, focusing on the actual requirements on the product rather than describing already established implementations.</p>	<p>Not accepted. Reason : The proposed comment is not concrete in itself but rather general and abstract. In addition, the amendment this time is to be made so as to bring the draft into line with the IMO Resolution.</p>
Germany (DE.1)	<p>1. Scope 2. Normative references Replace in three places “XXX” by “A.224(VII) as amended by Resolution MSC. 74(69), Annex 4”.</p>	<p>Accepted. The expression on IMO Resolution suggested by Germany are amended in line with the same expression in ISO/DIS 11674.</p>
Germany (DE.2)	<p>1. Scope Move contents of first sentence of 3rd paragraph to the new 4.1 General (see also DE.9)</p> <p>Reason : Scope shall not contain requirements (ISO/IEC Directives, Part 3, Third edition, §6.2.1).</p>	<p>Accepted.</p>
Germany (DE.3)	<p>1. Scope Modify second sentence of 3rd paragraph to comply to ISO/IEC Directives, Part 3, Third edition, subclause 6.2.1 as follows : This International Standard is <i>applicable for ship speeds from 0 to 30 knots</i>.</p>	<p>Accepted.</p>
Germany (DE.4)	<p>2. Normative references The lead-in text should be corrected as shown :</p>	<p>Accepted.</p>

	The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard, <u>For dated references, subsequent amendments to, or revisions of</u> , any of these publications do not apply. <u>At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and</u> However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. <u>For undated references, the latest edition of the normative document referred to applies.</u> Members of IEC and ISO maintain registers of currently valid International Standards.	
Germany (DE.5)	2. Normative references Insert "IMO" before <i>International Convention...</i> and re-arrange order.	Accepted.
Germany (DE.6)	2. Normative references Add after "IEC 61162" "(all parts)" to comply with ISO/IEC drafting rules.	Not accepted. Reason : At present, the referred standard "IEC 61162" is under consideration at IEC/TC 80. As soon as the final conclusion becomes available, it will be taken into consideration.
Germany (DE.7)	2. Normative references Delete "IMO Resolution A.817..." and "IMO Resolution A.861(20)..." as not referred to in the body of the standard.	Accepted. IMO Resolution A.817 and A.861 are deleted in "2.Normative references" and they are carried in Annex B as the informative documents.
Japan	Move "IMO Resolution A.817..." and "IMO Resolution A.861(20)..." to Annex B (informative) Bibliography.	Accepted.
Germany (DE.8)	3.1.7 performance check While this definition is quite acceptable it is in contradiction to what is required to be carried out under 5.3.3 performance checks. A careful consideration of the terms used in both places and of the requirements should be performed by the responsible WG.	By dint of including the meaning of comments of various countries through CD circulation process, countermeasures were taken in any way. Hence if you consider the text insufficient from the examination of a DIS draft to be circulated by ISO/CS, please bring this matter up again.
Germany	4 Performance requirements	Accepted.

(DE.9)	Insert a new subclause and renumber the following subclauses accordingly (see also DE.2): 4.1 General Echo-sounding equipment shall comply with the following performance requirements and with the general requirements of IEC 60945, where applicable.	Present subclause numbers, from 4.1 to 4.11, are moved down one by one because of adding the new subclause 4.1 proposed by Germany.
Germany (DE.10)	4.1.2.1 It is suggested to make the second sentence a separate, numbered paragraph.	Accepted. The provisions of second paragraph are separated as the new subclause 4.2.2.2.
Germany	Point 4.1.3 Main display and <u>Point 4.1.5 Pulse repetition rate:</u> The pulse repetition rate in the 20/200 m range changes by a factor of 3, but the displayed record (4.1.3) remains the same. Add in 4.1.3.....at least 15 minutes of soundings <i>on the deep range scale</i> .	Accepted.
Russian Federation	We offer 4.1.3 to be stated in following way : Main display may be performed either as recorder recording echogramma on paper tape, or as display recording echogramma on magnetic, electronic or optic accumulator been opportunely removed for the next repeated use. The displayed record shall show at least 15 minutes of soundings. Multi-color display may be used. In this case the colour assignment shall be clearly explained in the manual.	Not accepted. Reason : This provision has been extracted from the IMO resolution.
Japan	Separate Subclause 4.1.3 as follows. <i>4.1.3.1 The primary presentation shall be a suitable graphical display which provides the immediate depth and a visible record of soundings.</i> <i>4.1.3.2 The displayed record shall show at least 15 minutes of soundings.</i> <i>4.1.3.3 Multi-color display may be used; in this case, the colour assignment shall be clearly explained in the manual.</i> Reason : To clarify the meaning.	Accepted.
Sweden	4.1.5 : Should be expressed as maximum allowable delay for response.	Not accepted. Reason : This provision has been extracted from the IMO resolution. If you should like to submit this proposal

		again, you are requested to do so with numerical values clearly presented.
Germany (DE.12)	4.1.6 Roll and pitch Modify to comply to ISO/IEC Directives to read: <i>....the requirements of this International Standard when the ship is rolling...</i>	Accepted.
Germany (DE.13)	4.5.1 Depth alarm Insert in the last line “an” between “be” and “indication”.	Accepted.
Germany (DE.14)	4.6.2.2 Paper recording To make the requirement as probably intended (both data storage and marks may be performed on recording paper), the first paragraph should be redrafted as follows: <i>If paper is used for recording, there should be a clear indication when the paper remaining is less than 1 m.</i>	Not accepted. Reason : This provision has been extracted from the IMO resolution.
Germany (DE.15)	4.6.2.3 It is suggested to move this subclause to 4.1.2 Range scales where it better fits.	Accepted. German comments are specified as the new subclause 4.3.2.5.
Germany (DE.16)	4.8 Interfacing Insert a new second paragraph to care for VDR requirements (IMO Resolution A.861(20) paragraph 5.4.8) and cope with provisions in 4.2 as follows: These outputs shall include depth under keel, the dept scale currently being displayed, the transducer in use in multiple installations and other status information where available.	Accepted.
Germany (DE.17)	4.10 Marking This subclause is covered by IEC 60945 and may be deleted.	Not accepted. Reason : This subclause is covered by IEC 60945, but should be retained as in the text, because it is considered necessary especially to attract manufacturers' attention.
Japan	Subclause 4.10 Marking In the 1 st line, change “ of the manufacturer, type, serial number and year of manufacture.” to “ of the manufacturer, type and serial number.”	Accepted.

	Reason : Alignment to IEC 945:1996.	
Germany (DE.18)	4.11 Information This subclause is covered by IEC 60945 and may be deleted.	Not accepted. Reason : See above reason to the German comment to "4.10 Marking".
Germany (DE.19)	5. Methods of testing and required test results Insert ISO 9875 : 1996 5.1 as follows : Any requirement in clause 4 for which no test is specified in this clause or in IEC 60945, shall be checked by inspection of the equipment, the manufacturer's drawing or the relevant documents. The results of the inspection shall be stated in the test report.	Accepted. Present subclause numbers, from 5.1 to 5.13, are moved down one by one because of adding the new subclause 5.1 proposed by Germany.
Sweden	5.3 : This section should be re-written. The depth range, assuring certain mathematical models for the sound propagation in sea-water (as in Annex A), should be measured, not assuring operation with pulsed sinusoidal signals.	Not accepted. Reason : The amendment this time has been made so as to bring the draft into line with the IMO Resolution. Therefore, it is thought that the action to be taken in regard of new functions should be considered at a later date.
Germany	<u>Point 5.3.1.2.1 Figure of merit:</u> 1. "R" is used twice in the explanation : the first "R" should be "r". 2. Ns: add... equal to $82,5(50/3) \log_{10} f, f$ in kHz.	Accepted. Accepted.
Germany (DE.21)	5.5.1 Method of test The words "paper type" at the end of the first sentence shall be replaced by "means". Reason : data recording may be on paper recording or by other means, "Means" covers both. Add a new second sentence as follows: The means to retrieve recorded information shall be checked by inspection. Modify the third sentence as follows: If the EUT uses external medium <u>means</u> , such as a VDR, ECDIS, radar or other displays, etc., the applicant shall supply a typical equipment or instrument to demonstrate compliance to the requirements of 4.3, <u>4.6.2.1 and 4.6.2.2.</u>	Accepted. Accepted. Accepted.

	Reason : VDR by definition does not include playback equipment or other means to display stored information and this test is suitable also to verify compliance with 4.5.2.1 and 4.6.2.2.	
Germany (DE.22)	5.5.2 Required result Modify as follows to more exactly suit the method of test and the requirements: Water depths shall be recorded on the paper with <u>depth and</u> time marks as specified in 4.6.2.1 <u>for the duration of 12 hours</u> . Where other media <u>is means are</u> used the <u>this</u> information shall be recorded and retrieved at intervals of 1 min or shorter <u>less</u> for the duration of 12 hours and be retrievable.	Accepted.
Sweden	5.6 : This test assumes pulse operation, which is only one of several operational principles.	Not accepted. Reason : The amendment this time has been made so as to bring the draft into line with the IMO Resolution. Therefore, it is thought that the action to be taken in regard of new functions should be considered at a later date.
Germany (DE.23)	5.8.2 Presentation of Information insert : Covered by 5.3.5 and 5.5. Delete subclauses 5.8.2.1 and 5.8.2.2.	Not accepted. Reason : The purpose of the proposed comment is not clear. If both subclauses (5.8.2.1 and 5.8.2.2) are unnecessary, then subclause 5.8.2 also seems unnecessary.
Germany (DE.24)	Consequential to DE.17 and DE.18: Delete subclauses 5.12 and 5.13.	Not accepted. Reason : German proposals ([DE.17] and [DE.18]) for 4.10 and 4.11 were not accepted.

ISO/TC 8/SC 6

IEC/TC 80 member's Comments on ISO/CD 9875, Ships and marine technology
 - Marine echo-sounding equipment (doc. TC 8/SC 6 N 26)
 (Amendment on JMSA 98-148 Encl.3, date of 1998-10-29)

Member body	<p style="text-align: center;">COMMENTS</p> <p style="text-align: center;">Comments shall be reproduced as received either by re-typing them, or directly by pasting them on this form</p>	<p style="text-align: center;">OBSERVATION OF THE SECRETARIAT</p> <p style="text-align: center;">on each comment submitted</p>
Sweden (IEC/TC 80)	<p>All : The standard and the test methods proposed assumes a very conventional setup, with short narrow-band transmit pulses being fed to a transducer.</p> <p>Modern technology with most certainly make it possible to make a better and more reliable echo-sounder using normal signal processing technology, such as for instance PRBS signals, detection algorithms measuring the acoustic impedance variations rather than echo level etc. Such methods would make most of section 5 absolutely obsolete.</p> <p>Proposed change: General re-write, focusing on the actual requirements on the product rather than describing already established implementations.</p>	<p>Not accepted.</p> <p>Reason : The proposed comment is not concrete in itself but rather general and abstract. In addition, the amendment this time is to be made so as to bring the draft into line with the IMO Resolution.</p>
Germany (IEC/TC 80) (DE.1)	<p>1. Scope 2. Normative references Replace in three places "XXX" by "A.224(VII) as amended by Resolution MSC. 74(69), Annex 4".</p>	<p>Accepted.</p> <p>The expression on IMO Resolution suggested by Germany are amended in line with the same expression in ISO/DIS 11674.</p>
Japan (IEC/TC 80)	<p>1. Scope <u>Change to MSC.74(69) Annex 4</u> All <u>texts</u> of this standard....XXXX <u>MSC.74(69)Annex</u> are printed in italics and the resolution <u>and paragraphs</u> are indicated in <u>brackets</u>.</p>	<p>Accepted.</p> <p>See above the observation to German comment.</p>
Germany (IEC/TC 80) (DE.2)	<p>1. Scope Move contents of first sentence of 3rd paragraph to the new 4.1 General (see also DE.9)</p> <p>Reason : Scope shall not contain requirements (ISO/IEC Directives, Part 3, Third edition, §6.2.1).</p>	<p>Accepted.</p>

Germany (IEC/TC 80) (DE.3)	1. Scope Modify second sentence of 3rd paragraph to comply to ISO/IEC Directives, Part 3, Third edition, subclause 6.2.1 as follows : This International Standard is <i>applicable for ship speeds from 0 to 30 knots</i> .	Accepted.
Japan (IEC/TC 80)	2. Normative reference The following <u>normative documents</u> contain	Accepted.
Germany (IEC/TC 80) (DE.4)	2. Normative references The lead-in text should be corrected as shown : The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard, <u>For dated references, subsequent amendments to, or revisions of , any of these publications do not apply. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and However,</u> parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. <u>For undated references, the latest edition of the normative document referred to applies.</u> Members of IEC and ISO maintain registers of currently valid International Standards.	Accepted.
Germany (IEC/TC 80) (DE.5)	2. Normative references Insert “IMO” before <i>International Convention...</i> and re-arrange order.	Accepted.
Germany (IEC/TC 80) (DE.6)	2. Normative references Add after “IEC 61162” “(all parts)” to comply with ISO/IEC drafting rules.	Not accepted. Reason : At present, the referred standard “IEC 61162” is under consideration at IEC/TC 80. As soon as the final conclusion becomes available, it will be taken into consideration.
Germany (IEC/TC 80) (DE.7)	2. Normative references Delete “IMO Resolution A.817...” and “IMO Resolution A.861(20)...” as not referred to in the body of the standard.	Accepted. IMO Resolution A.817 and A.861 are deleted in “2.Normative references” and they are carried in Annex B as the informative documents.

Germany (IEC/TC 80) (DE.8)	<p>3.1.7 performance check</p> <p>While this definition is quite acceptable it is in contradiction to what is required to be carried out under 5.3.3 performance checks.</p> <p>A careful consideration of the terms used in both places and of the requirements should be performed by the responsible WG.</p>	By dint of including the meaning of comments of various countries through CD circulation process, countermeasures were taken in any way. Hence if you consider the text insufficient from the examination of a DIS draft to be circulated by ISO/CS, please bring this matter up again.
Germany (IEC/TC 80) (DE.9)	<p>4 Performance requirements</p> <p>Insert a new subclause and renumber the following subclauses accordingly (see also DE.2):</p> <p>4.1 General</p> <p>Echo-sounding equipment shall comply with the following performance requirements and with the general requirements of IEC 60945, where applicable.</p>	Accepted. Present subclause numbers, from 4.1 to 4.11, are moved down one by one because of adding the new subclause 4.1 proposed by Germany.
Germany (IEC/TC 80) (DE.10)	<p>4.1.2.1</p> <p>It is suggested to make the second sentence a separate, numbered paragraph.</p>	Accepted. The provisions of second paragraph are separated as the new subclause 4.2.2.2.
Germany (IEC/TC 80) (DE.11)	<p>4.1.3 Main display</p> <p>It is suggested to make the second sentence a separate paragraph and have both paragraph numbered.</p>	Accepted. Provisions of the present subclause 4.1.3 are separated into three paragraphs as the new subclause 4.2.3.1, 4.2.3.2 and 4.2.3.3 suggested by SC 6 Japan.
Sweden (IEC/TC 80)	4.1.5 : Should be expressed as maximum allowable delay for response.	Not accepted. Reason : This provision has been extracted from the IMO resolution. If you should like to submit this proposal again, you are requested to do so with numerical values clearly presented.
Germany	4.1.6 Roll and pitch	Accepted.

(IEC/TC 80) (DE.12)	Modify to comply to ISO/IEC Directives to read: <i>....the requirements of this International Standard when the ship is rolling...</i>	
Germany (IEC/TC 80) (DE.13)	4.5.1 Depth alarm Insert in the last line “an” between “be” and “indication”.	Accepted.
Japan (IEC/TC 80)	4.5.2 Add: This facilities may be arranged on a switchboard or others, not necessary to be an integral part of the equipment.	Accepted.
Germany (IEC/TC 80) (DE.14)	4.6.2.2 Paper recording To make the requirement as probably intended (both data storage and marks may be performed on recording paper), the first paragraph should be redrafted as follows: <i>If paper is used for recording, there should be a clear indication when the paper remaining is less than 1 m.</i>	Not accepted. Reason : This provision has been extracted from the IMO resolution.
Germany (IEC/TC 80) (DE.15)	4.6.2.3 It is suggested to move this subclause to 4.1.2 Range scales where it better fits.	Accepted. German comments are specified as the new subclause 4.3.2.5.
Germany (IEC/TC 80) (DE.16)	4.8 Interfacing Insert a new second paragraph to care for VDR requirements (IMO Resolution A.861(20) paragraph 5.4.8) and cope with provisions in 4.2 as follows: These outputs shall include depth under keel, the dept scale currently being displayed, the transducer in use in multiple installations and other status information where available.	Accepted.
Germany (IEC/TC 80) (DE.17)	4.10 Marking This subclause in covered by IEC 60945 and may be deleted.	Not accepted. Reason : This subclause is covered by IEC 60945, but should be retained as in the text, because it is considered necessary especially to attract manufacturers' attention.
Japan (IEC/TC 80)	4.10 Not needed in the main text, as this is common in IEC 60945	Not accepted. Reason : See above reason to the German comment to “4.10 Marking”.
Germany (IEC/TC 80)	4.11 Information This subclause in covered by IEC 60945 and may be deleted.	Not accepted. Reason :

(DE.18)		See above reason to the German comment to "4.10 Marking".
Japan (IEC/TC 80)	4.11 Not needed in the main text, as this is common in IEC 60945	Not accepted. Reason : See above reason to the German comment to "4.10 Marking".
Germany (IEC/TC 80) (DE.19)	5. Methods of testing and required test results Insert ISO 9875 : 1996 5.1 as follows : Any requirement in clause 4 for which no test is specified in this clause or in IEC 60945, shall be checked by inspection of the equipment, the manufacturer's drawing or the relevant documents. The results of the inspection shall be stated in the test report.	Accepted. Present subclause numbers, from 5.1 to 5.13, are moved down one by one because of adding the new subclause 5.1 proposed by Germany.
Sweden (IEC/TC 80)	5.3 : This section should be re-written. The depth range, assuring certain mathematical models for the sound propagation in sea-water (as in Annex A), should be measured, not assuring operation with pulsed sinusoidal signals.	Not accepted. Reason : The amendment this time has been made so as to bring the draft into line with the IMO Resolution. Therefore, it is thought that the action to be taken in regard of new functions should be considered at a later date.
Germany (IEC/TC 80) (DE.20)	5.3.1.2.1 Figure of merit Correct in definition as follows: <u>rR</u> is the one-way loss figure due to roll and pitch, in decibels;	Accepted.
Germany (IEC/TC 80) (DE.21)	5.5.1 Method of test The words "paper type" at the end of the first sentence shall be replaced by "means". Reason : data recording may be on paper recording or by other means, "Means" covers both. Add a new second sentence as follows: The means to retrieve recorded information shall be checked by inspection. Modify the third sentence as follows: If the EUT uses external medium means, such as a VDR, ECDIS, radar or other displays, etc., the applicant shall supply a typical equipment or instrument to demonstrate compliance to the requirements of 4.3, 4.6.2.1 and 4.6.2.2.	Accepted. Accepted. Accepted.

	Reason : VDR by definition does not include playback equipment or other means to display stored information and this test is suitable also to verify compliance with 4.5.2.1 and 4.6.2.2.	
Germany (IEC/TC 80) (DE.22)	5.5.2 Required result Modify as follows to more exactly suit the method of test and the requirements: Water depths shall be recorded on the paper with <u>depth and</u> time marks as specified in 4.6.2.1 <u>for the duration of 12 hours</u> . Where other media is <u>means are</u> used the <u>this</u> information shall be recorded and retrieved at intervals of 1 min or shorter <u>less</u> for the duration of 12 hours and be <u>retrievable</u> .	Accepted.
Sweden (IEC/TC 80)	5.6 : This test assumes pulse operation, which is only one of several operational principles.	Not accepted. Reason : The amendment this time has been made so as to bring the draft into line with the IMO Resolution. Therefore, it is thought that the action to be taken in regard of new functions should be considered at a later date.
Germany (IEC/TC 80) (DE.23)	5.8.2 Presentation of Information insert : Covered by 5.3.5 and 5.5. Delete subclauses 5.8.2.1 and 5.8.2.2.	Not accepted. Reason : The purpose of the proposed comment is not clear. If both subclauses (5.8.2.1 and 5.8.2.2) are unnecessary, then subclause 5.8.2 also seems unnecessary.
Germany (IEC/TC 80) (DE.24)	Consequential to DE.17 and DE.18: Delete subclauses 5.12 and 5.13.	Not accepted. Reason : German proposals ([DE.17] and [DE.18]) for 4.10 and 4.11 were not accepted.